Functions and their Representations

Using Technology to Explore Functions

Example: Use technology to create a table of function values for the function *F* denoted by $F(x) = \frac{1}{2}x^2 - 21x - 275$

x	F(x)

Use the table to create an appropriate viewing window for *F*.

The x interval could be: _____

The y interval could be: _____

Example: For the function k defined by $k(x) = 15(x+10)^2 - 19$, use technology to determine the following. Round answers as necessary.

a) Any intercepts: _____

b) The vertex:_____

c) The domain:_____

d) The range:_____

Example: Let $g(x) = (100 - 3x)(20 + 5x)$ and $h(x) = 215x + 500$. Use graphing technology to determine the following.

a) What are the points of intersection for these two functions?

_____

b) Solve $g(x) = h(x)$

The solution set is _____

c) Solve $g(x) > h(x)$

The solution set is _____

d) Solve $g(x) \leq h(x)$

The solution set is _____

Example: Graphically solve the following equation or inequality.

$a)\quad 2x^3-5x+1=-\frac{1}{2}x+1$

The solution set is _____

$b)\ -0.05x^2-2.5x-20.1<0.05x^2+1.9x+19.2$

The solution set is _____